REMARKS

The Office Action mailed August 13, 2009 has been carefully considered and the following response prepared.

Claim 1 has been amended to add component f) one or more customary auxiliaries and additives. Support for this amendment can be found throughout the specification, and in particular in original claim 6.

REJECTION UNDER 35 USC 112, FIRST PARAGRAPH

At page 2 of the Office Action, the Examiner maintained the rejection of claims 1-16 under 35 USC 112, first paragraph as not enabled. In the present Office Action, the Examiner agreed with Applicants that the instant specification teaches one of ordinary skill in the art how to make and use the invention as broadly claimed (page 5, first paragraph). The Examiner, however, contended that the references cited in the present rejection, Schnabel et al. (U.S. Patent 6,693,063), Wurtz et al. (U.S. Published application 2002/0016263) and Sixl (U.S. Patent 6,479,432), make the broad claims obvious, and that the claims are not commensurate in scope with Applicants' evidence of unexpected results in the examples in the specification and declaration.

Applicants again traverse this rejection. Applicants' remarks relating to this rejection in the response filed April 20, 2009 are incorporated by reference in the present response.

In order to comply with the enablement requirement of section 112, first paragraph, the specification must teach those skilled in the art how to make and use the invention as broadly as it is claimed. The Examiner admitted in the remarks to the present rejection that the specification enables the invention as broadly claimed. Claims 1-16 therefore comply with section 112, first paragraph and the instant rejection should be withdrawn. The Examiner's remarks relating to the alleged obviousness of the claimed invention are not pertinent to the issue of enablement of the claims, and will be addressed below in connection with Applicants' response to the section 103 rejection.

As discussed above, claims 1-16 comply with the enablement requirement of section 112, first paragraph, and withdrawal of this rejection is respectfully requested.

REJECTION UNDER 35 USC 103

At page 6 of the Office Action the Examiner maintained the rejection of claims 1-16 under 35 USC 103 as being unpatentable over the combined teachings of Schnabel et al. (U.S. Patent 6,693,063), Wurtz et al. (U.S. Published application 2002/0016263) and Sixl (U.S. Patent 6,479,432). The Examiner alleged that it would have been *prima facie* obvious to the ordinary artisan at the time the invention was made to have combined Applicants' components in a single herbicidal oil suspension concentrate because the prior art teaches that it was well known in the art to combine the disclosed sulfonylurea herbicides, safeners, and solvents in a suspension concentrate, and because Wurtz et al specifically discloses the utility of adding the sulfosuccinate esters in these compositions. The Examiner further alleged that all of the cited references are in the herbicide art, and therefore it would have been expected that their combination would yield a composition that successfully functions as an herbicide.

In the present Office Action, the Examiner alleged that the claims are not commensurate in scope with the evidence of unexpected results provided in the specification and declaration for the claimed compositions. The Examiner contended that compositions in the declaration comprise foramsulfuron or iodosulfuron, rheological additives, plus dispersants/emulsifiers, and Triton GT-7M R, but the claims are not drawn to such compositions. Also, the Examiner contended that the declaration provides unexpected results for compositions wherein the herbicides are foramsulfuron or iodosulfuron, whereas the claims are to all sulfonamide herbicides.

Applicants again traverse this rejection. Applicants' remarks relating to this rejection in the response filed July 3, 2008, and April 20, 2009 are incorporated by reference in the present response.

Claim 1 has been amended to add component f) one or more customary auxiliaries and additives. Amended claim 1 is directed to an oil suspension concentrate, comprising a) one or

more herbicidally active compounds from the group of the sulfonamides in suspended form, b) one or more safeners, c) one or more organic solvents, d) one or more sulfosuccinates and f) one or more customary auxiliaries and additives. Claims 2-16 depend directly or indirectly from claim 1.

Schnabel et al., Wurtz et al. and Sixl are each concerned with herbicidal compositions. However, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the results would be been predictable to one of ordinary skill in the art. *KSR International Co. v. Teleflex Inc.* 127 S. Ct 1727, 82 USPQ 2d 1385, 1396 (2007). As discussed in Applicants' previous response, formation of crystals by the active compound in liquid suspension concentrates was an art-recognized problem, as shown in the description of oil based suspension concentrates submitted as Exhibit B with Applicants' response filed July 3, 2008, and resubmitted herewith as Exhibit 1. Solutions for the problems of physical stability of the newly developed oil suspension concentrates could not be obtained by the combination of the teaching for a suspension concentrate formulation (Sixl) with the teachings for emulsion concentrate formulations (Schnabel et al. and Wurtz et al.). Schnabel et al., Sixl and Wurtz et al. are silent on the need to reduce the formation of crystals consisting of the active compound, which ultimately would lead to the undesired formation of plaques. A person skilled in the art would not have been aware of this potential problem that could surface from the reading of any of the cited references, much less be led to the formation of the present invention in the expectation that the detrimental formation of crystals could be suppressed. Applicants therefore again respectfully disagree with the Examiner's assertion that one can arrive at the formulation of the present invention from the combination of the teachings of Schnabel et al., Sixl and Wurtz et al., since the problem of crystal formation was not identified in any of the cited references.

Moreover, if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). The suggested combination of references would require a substantial reconstruction and redesign of the elements shown in the cited references as well as a

change in the basic principle under which the formulations disclosed therein were designed to operate.

Oil suspension concentrates are stable suspension of active ingredient(s) in an organic fluid, which may contain other dissolved active ingredient(s), intended for dilution with water before use. Emulsifiable concentrates, disclosed in Schnabel et al. and Wurtz et al., are stable homogeneous liquids in which the active ingredient is dissolved in a suitable solvent, free from visible suspended matter and sediment, to be applied as an emulsion after dilution in water. (Exhibit 1)

Sixl discloses suspension concentrates; however, there is no disclosure or suggestion in Sixl of oil suspension concentrates containing sulfosuccinates. Wurtz et al. describes the effect of chemical stabilization and solubilization of an active ingredient in an organic liquid by special surfactants, namely sulfosuccinates, to form an emulsion concentrate. An emulsion concentrate is a different sort of formulation than the claimed oil suspension concentrates. Combining the sulfosuccinates of Wurtz et al. with a suspension concentrate would change the principle of operation of the formulations in Wurtz et al. and Schnabel et al.

As discussed in Applicants' previous response, typically, a dispersion of solid particles in a liquid is thermodynamically unstable. This means that the dispersion tends to reduce its solid-liquid surface area, to reduce its free solid-liquid surface energy, to achieve a thermodynamically stable state. The average size of particles in a dispersion grow ("particle growth"), and the dispersion becomes instable and forms sediments. This technical aspect of particle growth is called the "Ostwald ripening", which leads to a destabilization of a dispersion of particles in a liquid. The rate of particle growth is mainly driven by the solubility of the dispersed compound in the liquid. When the solubility of the particles in a dispersion is zero, no Ostwald ripening occurs. However, when the particles in a dispersion are partly soluble, Ostwald ripening occurs, because increasing solubilities cause increasing/higher growth rates regarding the unwanted particle growth.

In the case of a dispersion of solid particles in an oil suspension concentrate, an increase in solubility of the active ingredient should lead to an increasing/higher rate of particle growth and to an accelerated formation of sediment (collapsing of the dispersed system). This is not the case for sulfosuccinates and the active ingredients of the claimed oil suspension concentrates, which are dispersed in an organic liquid, because the claimed oil suspension concentrates show no Ostwald ripening, and are therefore stable against sedimentation. The claimed oil suspension concentrates operate in a manner contrary to the aforementioned established scientific concepts. These results would not be predictable to one of ordinary skill in the art. The oil suspension concentrates of the present invention could not be obtained simply from the reading of Schnabel et al., Sixl and Wurtz et al. It is apparent that the claimed oil suspension concentrates are neither disclosed nor suggested by the combination of Schnabel et al., Sixl and Wurtz et al.

The teachings of Schnabel et al., Wurtz et al., and Sixl are therefore not sufficient to render claims 1-16 *prima facie* obvious because the combination of references would require a substantial reconstruction and redesign of the elements shown in the cited references as well as a change in the basic principle under which the formulations disclosed therein were designed to operate.

In the present rejection, the Examiner alleged that the composition in Wurtz et al. reads on the instant compositions and renders the combination of ingredients obvious; therefore both the composition in Wurtz et al. and the instant composition should yield the same results in terms of chemical and physical properties with respect to Ostwald ripening. The Examiner stated that the instant claims are drawn to oil suspensions, whereas Wurtz et al. teaches oil in water emulsions. The Examiner alleged that Exhibit B filed by Applicants on July 3, 2008 discloses that an oil based suspension equates to an oil in water emulsion and suspension concentrates, and for this reason, the oil in water emulsion concentrates of Wurtz et al. suggest the instant oil based suspension concentrates.

Applicants disagree with the Examiner's characterization of the compositions disclosed in Wurtz et al., as well as the interpretation of Exhibit B (Manual on development and use of FAO and WHO specifications for pesticides).

Exhibit B submitted with the response filed July 3, 2008 does not equate oil suspension concentrates with oil in water emulsions. Exhibit B has been resubmitted as Exhibit 1, and also includes pages relating to emulsifiable concentrates (EC) and oil in water emulsions (EW). Section 7.34 at page 153 of Exhibit 1, "Oil-Based Suspension Concentrates (OD) (Oil dispersion)" states:

> OD formulations are metastable systems, like oil-in-water emulsions (EW) and suspension concentrates (SC). Therefore, after transportation and storage it may be necessary to re-homogenize the formulation, either by shaking or by stirring.

The pesticide specification for oil-based suspension concentrates does not equate oil-in-water (EW) and suspension concentrates (SC) with this type of formulation. The description merely mentions that oil-based suspension concentrates, oil-in-water emulsions and suspension concentrates are each metastable systems. The formulations are different art-recognized types of formulations, as shown in Exhibit 1, and Exhibit 2 (Catalogue of pesticide formulation types and international coding system," pages 2, 5 and 6), submitted herewith.

Moreover, Wurtz et al. teaches emulsion concentrates, not oil in water emulsions. In Wurtz et al., and in the description in Exhibit 1, an emulsion concentrate is a homologous solution of an active ingredient in an organic liquid, where Ostwald ripening does not play any role. There is nothing in Wurtz et al. that suggests either the problem of crystal formation in oil suspension concentrates, or how to correct the problem.

The Examiner alleged that the evidence of unexpected results in the specification and declaration of Dr. Deckwer was not commensurate with the scope of the claims because the compositions in the declaration comprise foramsulfuron or iodosulfuron, rheological additives, plus dispersants/emulsifiers, and Triton GT-7M R, but the claims are not drawn to such compositions. Claim 1 has been amended to add component f) one or more customary auxiliaries and additives, which overcomes this ground for the instant rejection.

The Examiner also alleged that the declaration only provides unexpected results for compositions wherein the herbicides are foramsulfuron or iodosulfuron, whereas the claims are

to all sulfonamide herbicides. Applicants submitted the declaration of Dr. Roland Deckwer with the response filed July 3, 2008. The declaration presents experimental data showing that the claimed oil suspension concentrates suppress the formation of crystals and subsequently the formation of plaques. The declaration also demonstrates the chemical and physical stability of oil suspension concentrates of the invention of a representative number of sulfonamides in Table 3.

Applicants submit herewith the substitute declaration of Dr. Deckwer which corrects clerical errors in Tables 5 and 6 on page 7 of the declaration filed July 3, 2008. In Table 5 in the line for Solvesso, the values for examples 6.1 and 6.2 have been switched with each other, and the same in the line for Triton GR-7M E. Also, in Table 7, the upper example has been changed from Example 6.2 to Example 6.1, and the lower example has been changed from Example 6.1 to Example 6.2.

Applicants also submit herewith a second declaration of Dr. Roland Deckwer indicating that all other active ingredients in Table 3 in the substitute declaration show the same features as the formulations containing foramsulfuron or iodosulfuron. Table 3 sets out formulations containing the herbicides foramsulfuron, mesosulfuron, ethoxysulfuron, amidosulfuron, propoxycarbazon, flucarbazon, compound A21.1 and thifensulfuron, which represent a wide choice of examples of the group of sulfonamides. On pages 1 and 2, the second declaration explains the criteria used to measure chemical and physical stability of the formulations in Table 3.

Applicants submit that the claims are commensurate in scope with the evidence of unexpected results provided in the specification and declarations of Dr. Deckwer. The claimed oil suspension concentrates exhibit properties that could not be expected in view of the combined teachings of Schnabel et al., Wurtz et al., and Sixl, and which clearly overcome or rebut any assertion that the claimed herbicidal combinations are *prima facie* obvious.

In summary, for at least the reasons discussed above, Applicants submit that a *prima facie* case of obviousness has not been established with regard to claims 1-16, and that the

rejection is improper and should be withdrawn. Claims 1-16 are not obvious over the combined teachings of Schnabel et al., Wurtz et al., and Sixl. Withdrawal of this section 103 rejection is again respectfully requested.

In view of the above the present application is believed to be in a condition ready for allowance. Reconsideration of the application, and entry and consideration of the amendments to the claims, declarations of Dr. Roland Deckwer, and the information in Exhibits 1 and 2 is respectfully requested. An early Notice of Allowance is earnestly solicited.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 03-2775, under Order No. 09879-00039-US. A duplicate copy of this paper is enclosed.

Dated: February 16, 2010

Respectfully submitted,

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EXHIBIT 1

Manual on development and use of FAO and WHO specifications for pesticides [‡]

March 2006 revision of the
First edition

Available only on the internet

http://www.fao.org/ag/AGP/AGPP/Pesticid/Specs/Pdf/Manual_update%202006.pdf

PESTICIDE SPECIFICATIONS

In 2001, the Food and Agriculture Organization of the United Nations (FAO) and the World Health Organization (WHO) agreed to develop specifications for pesticides jointly, thus providing unique, robust and universally applicable standards for pesticide quality. This joint programme is based on a Memorandum of Understanding between the two Organizations.

The March 2006 revision[1] of the 1st edition of the *Manual on development and use of FAO and WHO specifications for pesticides*, which is available only on the Internet, supersedes all previous manuals and guidance documents published by either FAO or WHO on this subject. It provides the standard process, unified requirements and procedures, harmonized definitions and nomenclature, technical guidelines and standards applicable to pesticides for use in agriculture and public health. FAO/WHO specifications for pesticides based on this manual are developed through the FAO/WHO Joint Meeting on Pesticide Specifications (JMPS) and published on the Web sites of the two Organizations:

http://www.fao.org/ag/agp/agpp/pesticid/

and

http://www.who.int/whopes/quality/

FAO/WHO specifications apply only to the products of manufacturers whose technical materials have been evaluated. The specifications may be used to provide an international point of reference against which the quality of products can be judged, either for regulatory purposes or in commercial dealings, thereby helping to prevent the trade, sale and use of inferior quality pesticide products. Thus the specifications will enhance confidence in the purchase and use of pesticides and, at the same time contribute towards better pest control, sound agricultural production, effective vector control measures and improved user, public and environmental safety throughout the world, especially in developing countries.

[1] Grey shading = new/revised or deleted [‡] text or numbers adopted by JMPS in March 2006.

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Grey shading = new/revised or deleted [‡] text adopted by JMPS in February 2006.

7.11 EMULSIFIABLE CONCENTRATES (EC)

Note for preparation of draft specifications Do not omit clauses or insert additional clauses, nor insert limits that are more lax than those than given in the guidelines, without referring to section 4. From the "Notes" provided at the end of this guideline, incorporate only those which are applicable to the particular specification.

..... [ISO common name] EMULSIFIABLE CONCENTRATE

[CIPAC number]/EC (month & year of publication)

7.11.1 Description

The material shall consist of technical ..... [ISO common name], complying with the requirements of FAO/WHO specification ..... , in the form of ..... (see Section 4.2), dissolved in suitable solvents, together with any other necessary formulants. It shall be in the form of a stable homogeneous liquid, free from visible suspended matter and sediment, to be applied as an emulsion after dilution in water.

7.11.2 Active ingredient

7.11.2.1 **Identity tests** (Note 1)

The active ingredient shall comply with an identity test and, where the identity remains in doubt, shall comply with at least one additional test.

7.11.2.2 ..... **[ISO common name] content** (Note 1)

The ..... [ISO common name] content shall be declared (g/kg or g/l at 20 ± 2°C, Note 2) and, when determined, the average content measured shall not differ from that declared by more than the appropriate tolerance, given in the table of tolerances, Section 4.3.2.

7.11.3 Relevant impurities

7.11.3.1 **By-products of manufacture or storage** (Note 3), if required

Maximum: .....% of the ..... [ISO common name] content found under 7.11.2.2.

7.11.3.2 **Water** (MT 30.5) (Note 4)

Maximum: ..... g/kg.

7.11.4 Physical properties

7.11.4.1 **Acidity** and/or **Alkalinity** (MT 191) or **pH range** (MT 75.3) (Note 4), if required

Maximum acidity: ..... g/kg calculated as H_2SO_4.

Maximum alkalinity: ..... g/kg calculated as NaOH.

pH range: ..... to .....

7.11.4.2 **Emulsion stability and re-emulsification** (MT 36.1.1, MT 36.3 or MT 183)

The formulation, when diluted at 30 ± 2°C (Notes 5 and 6) with CIPAC Standard Waters A and D, shall comply with the following:

Time after dilution	Limits of stability, MT 36.1, MT 36.3
0 h	Initial emulsification complete
0.5 h	"Cream", maximum: ..... ml
2.0 h	"Cream", maximum: ..... ml "Free oil", maximum: ..... ml
24 h	Re-emulsification complete
24.5 h	"Cream", maximum: ..... ml "Free oil", maximum: ..... ml
Note: in applying MT 36.1 or 36.3, tests after 24 h are required only where results at 2 h are in doubt	
[‡]	[‡]
Time after dilution	Limits of stability, MT 183
2 min	AC reading maximum .....
7 to 32 min	AC reading similar to above (no major increase, decline or fluctuation) Note: in applying MT 183, initial AC reading will be <1 in most cases

7.11.4.3 **Persistent foam** (MT 47.2) (Note 7)

Maximum: ..... ml after 1 min.

7.11.5 Storage stability

7.11.5.1 **Stability at 0°C** (MT 39.3)

After storage at 0 ± 2°C for 7 days, the volume of solid and/or liquid which separates shall not be more than 0.3 ml.

7.11.5.2 **Stability at elevated temperature** (MT 46.3)

After storage at 54 ± 2°C for 14 days (Note 8), the determined average active ingredient content must not be lower than .....% relative to the determined average content found before storage

7.21 EMULSIONS, OIL IN WATER (EW)

Introduction

EW is the designation for a stable emulsion of active ingredient(s) in an aqueous phase, intended for dilution with water before use. The active ingredient is normally a liquid and forms the dispersed oil phase, but it is also possible to emulsify a solid or liquid active ingredient dissolved in a water immiscible solvent.

Emulsions, like suspension concentrates, are metastable systems. Therefore, after transportation and storage it may be necessary to re-homogenize the formulation, either by shaking small containers or by stirring the contents of large containers.

Emulsions may be non-Newtonian liquids, with complex rheology. Although the rheology can influence the dilution characteristics, these are checked indirectly by the emulsion stability test.

These guideline specifications apply to aqueous macro-emulsions only and not to other formulations such as suspo-emulsions (SE), inverse emulsions (EO) or micro-emulsions (ME).

Note for preparation of draft specifications. Do not omit clauses or insert additional clauses, nor insert limits that are more lax than those than given in the guidelines, without referring to section 4. From the "Notes" provided at the end of this guideline, incorporate only those which are applicable to the particular specification

..... [ISO common name] EMULSION, OIL IN WATER

[CIPAC number]/EW (month & year of publication)

7.21.1 Description

The formulation shall consist of an emulsion of technical ..... [ISO common name], complying with the requirements of FAO/WHO specification ..... , in the form of ..... (see Section 4.2), in an aqueous phase together with suitable formulants. After gentle agitation, the formulation shall be homogeneous (Note 1) and suitable for dilution in water.

7.21.2 Active ingredient

7.21.2.1 Identity tests (Note 2)

The active ingredient shall comply with an identity test and, where the identity remains in doubt, shall comply with at least one additional test.

7.21.2.2 ..... [ISO common name] content (Note 2)

The ..... [ISO common name] content shall be declared (g/kg or g/l at 20 ± 2°C, Note 3) and, when determined, the average content measured shall not differ from that declared by more than the appropriate tolerance, given in the table of tolerances, Section 4.3.2.

7.31 AQUEOUS SUSPENSION CONCENTRATES (SC)

Introduction

SC is the designation for a stable suspension of active ingredient(s) in an aqueous continuous phase, intended for dilution with water before use.

The parameters which best describe the performance characteristics are:

- pourability test (to ensure that the SC can be poured from its container);
- water dispersibility (spontaneity of dispersion), suspensibility, wet sieve and persistent foam tests (to ensure the sprayability of the diluted suspension).

Some other physical properties, especially particle size range and viscosity, however, are excluded from the specification for the following reasons:

- particle size range: There is no internationally accepted, simple method for determination of the particle size range of SCs. Moreover, particle size range is described and limited in the specification by a number of easily quantifiable parameters which are influenced by it. These parameters are the wet sieve analysis, suspensibility, pourability and water dispersibility.
- viscosity: Although viscosity is also an important property, it cannot readily be determined by simple means. Since most SCs show non-Newtonian flow characteristics, viscosity is only one part of a much more complex rheology. Pourability and water dispersibility parameters included in the specification adequately describe the flow (rheological) properties.

Note for preparation of draft specifications. Do not omit clauses or insert additional clauses, nor insert limits that are more lax than those than given in the guidelines, without referring to section 4. From the "Notes" provided at the end of this guideline, incorporate only those which are applicable to the particular specification

..... [ISO common name] AQUEOUS SUSPENSION CONCENTRATE

[CIPAC number]/SC (month & year of publication)

7.31.1 Description

The material shall consist of a suspension of fine particles of technical ..... [ISO common name], complying with the requirements of FAO/WHO specification ....., in the form of ..... (see Section 4.2), in an aqueous phase together with suitable formulants. After gentle agitation the material shall be homogeneous (Note 1) and suitable for further dilution in water.

7.34 OIL-BASED SUSPENSION CONCENTRATES (OD) (Oil Dispersion)

Introduction

An oil-based suspension concentrate (OD) is a stable suspension of active ingredient(s) in an organic fluid, which may contain other dissolved active ingredient(s), intended for dilution with water before use.

OD formulations are metastable systems, like oil-in-water emulsions (EW) and suspension concentrates (SC). Therefore, after transportation and storage it may be necessary to re-homogenise the formulation, either by shaking or by stirring.

OD, like SC formulations, do not disperse as spontaneously as EC formulations upon dilution in water. Therefore the spray solution has to be stirred in order to obtain a homogeneous dispersion before application.

The parameters which best describe the performance characteristics are:

- pourability (to ensure that the OD can be poured from its container);
- dispersion stability, wet sieve and persistent foam tests (to ensure the sprayability and stability of the diluted suspension);
- storage at elevated temperature (to ensure the absence of crystal growth upon storage).

Information about other properties may also be given, e.g. mass per millilitre, acidity or alkalinity and stability at 0°C, but these parameters do not normally constitute essential parts of the specification.

Note for preparation of draft specifications. Do not omit clauses or insert additional clauses, nor insert limits that are more lax than those than given in the guidelines, without referring to section 4. From the "Notes" provided at the end of this guideline, incorporate only those which are applicable to the particular specification.

..... [ISO common name] OIL-BASED SUSPENSION CONCENTRATE

[CIPAC number]/OD (month & year of publication)

7.34.1 Description

The material shall consist of a stable suspension of fine particles of technical ..... [ISO common name], complying with the requirements of FAO specification ....., in the form of ..... (see Section 4.2), in a non-aqueous fluid together with suitable formulants. After shaking or stirring of the sample, the material shall be homogeneous (Note 1).

7.34.2 Active ingredient

7.34.2.1 Identity tests (Note 2)

The active ingredient shall comply with an identity test and, where the active remains in doubt, shall comply with at least one additional test.

EXHIBIT 2

CropLife INTERNATIONAL

Representing the Plant Science Industry

Technical Monograph n°2, 5th Edition

Catalogue of pesticide formulation types and international coding system

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CODE	TERM	DEFINITION
DP	Dustable powder	A free-flowing powder suitable for dusting.
DS	Powder for dry seed treatment	A powder for application in the dry state directly to the seed.
DT	Tablet for direct application	Formulation in the form of tablets to be applied individually and directly in the field, and/or bodies of water, without preparation of a spraying solution or dispersion.
EC	Emulsifiable concentrate	A liquid, homogeneous formulation to be applied as an emulsion after dilution in water.
ED	Electrochargeable liquid	Special liquid formulation for electrostatic (electrodynamic) spraying.
EG	Emulsifiable Granule	A granular formulation to be applied as an oil-in-water emulsion of the active ingredient(s) after disintegration in water, which may contain water insoluble formulants.
EO	Emulsion, water in oil	A fluid, heterogeneous formulation consisting of a solution of pesticide in water dispersed as fine globules in a continuous organic liquid phase.
EP	Emulsifiable powder	A powder formulation to be applied as an oil-in-water emulsion of the active ingredient after dispersion in water, which may contain water insoluble formulants.
ES	Emulsion for seed treatment	A stable emulsion for application to the seed either directly or after dilution.
EW	Emulsion, oil in water	A fluid, heterogeneous formulation consisting of a solution of pesticide in an organic liquid dispersed as fine globules in a continuous water phase.
FD	Smoke tin	Special form of smoke generator.

CODE	TERM	DEFINITION
MC	Mosquito coil	A coil which burns (smolders) without producing a flame and releases the active ingredient into the local atmosphere as a vapour or smoke.
ME	Micro-emulsion	A clear to opalescent, oil and water containing liquid, to be applied directly or after dilution in water, when it may form a diluted micro-emulsion or a conventional emulsion.
MG	Microgranule	A granule in the particle size range from 100 to 60 µm.
MV	Vaporizing mats	A mat, made from pulp or other suitable inert materials, and impregnated with an active ingredient. The mat is intended for use in a heating unit designed to produce slow volatilisation of the active ingredient.
OD	Oil dispersion	A stable suspension of active ingredient(s) in a water-immiscible fluid, which may contain other dissolved active ingredient(s), intended for dilution with water before use.
OF	Oil miscible flowable concentrate (oil miscible suspension)	A stable suspension of active ingredient(s) in a fluid intended for dilution in an organic liquid before use.
OL	Oil miscible liquid	A liquid, homogeneous formulation to be applied as a homogeneous liquid after dilution in an organic liquid.
OP	Oil dispersible powder	A powder formulation to be applied as a suspension after dispersion in an organic liquid.
PA	Paste	Water-based, film-forming composition.
PB	Plate bait	Special form of bait.
PC	Gel or paste concentrate	A solid formulation to be applied as a gel or paste after dilution with water.

NOTE
Special forms of baits

BB - Block bait

AB - Grain bait

GB - Granular bait

PB - Plate bait

SB - Scrap bait

CODE	TERM	DEFINITION
PO	Pour-on	Solution for pouring on the skin of animals in a high volume (normally more than 100ml per animal)
PR	Plant rodlet	A small rodlet, usually a few centimetres in length and a few millimetres in diameter, containing an active ingredient.
PS	Seed coated with a pesticide	Self defining.
RB	Bait (ready for use)	A formulation designed to attract and be eaten by the target pests.
SA	Spot-on	Solution for spot application on the skin of animals in a low volume (normally less than 100ml per animal).
SB	Scrap bait	Special form of bait.
SC	Suspension concentrate (=flowable concentrate)	A stable suspension of active ingredient(s) in water, intended for dilution with water before use.
SD	Suspension concentrate for direct application	A stable suspension of active ingredient(s) in a fluid, which may contain other dissolved active ingredient(s), intended for direct application to rice paddies, for example.
SE	Suspo-emulsion	A fluid, heterogeneous formulation consisting of a stable dispersion of active ingredients in the form of solid particles and fine globules in a continuous water phase.
SG	Water soluble granule	A formulation consisting of granules to be applied as a true solution of the active ingredient after dissolution in water, but which may contain insoluble inert ingredients.